

IN THE SPECIFICATION:

Page 6, replace the paragraph starting at line 9 and ending at line 28 with the following amended paragraph.

A traditional pressure regulator, as it was used up to now in systems described above, is illustrated in Fig. 2 in a sectional view. A diaphragm 23 is clamped between a lower housing 21 and an upper housing [23] 22 whereby the diaphragm 23 acts upon a valve element 25 via a tappet 24 and whereby the valve element 25 is biased by a closing spring 26. A reinforcement plate 27 abuts the diaphragm 23 whereby the spring 29 is captured in compression between the reinforcement plate 27 and the adjustable support element 28, and whereby the spring 29 permits adjustment of the desired pressure by means of the adjustment screw 30. The fluid pressure at the output 32 of the pressure regulator effects, via a boring 33, the side of the diaphragm 23 disposed opposite of the spring 29. When the fluid pressure at the output 32 exceeds thereby a value determined by the force of the spring, the diaphragm 23 is lifted from the tappet 24 and the valve element 25 is urged to a closed position by the closing spring 26. If the pressure decreases, in contrast, then the spring 29 pushes the diaphragm 23 downwardly whereby the valve element 25 is lifted from the seat by the tappet 24. A connection is thereby also established between the input 34 of the pressure regulator and its output 32 so that fluid can be replenished and increase the pressure at the output-side to such a degree until the diaphragm 23 is

pushed up against the force of the spring 29 and until the valve element 25 has reached again the closed position.

Page 7, replace the paragraph starting at line 14 to page 8 ending at line 7 with the following amended paragraph.

The pressure regulator 9 of the invention operates also like the traditional pressure regulator described above whereby communication between the input 48 and the output 46 is controlled by the valve element 49 dependent on the pressure at the output 46 of the pressure regulator 9. As explained above, the valve element 49 is biased by the closing spring 50 in the closing direction and brought to the open position through the diaphragm 40 by means of the tappet 51 when the pressure at the output 46 drops below a value that is defined by the force acting upon the diaphragm 40 from above. The force onto the diaphragm 40 can be generated by means of an adjustment spring, as in the case of traditional pressure regulators. However, the force in the invention is generated advantageously by means of compressed air, independent from any deflection, and which preferably flows continuously through the boring 52 into the upper housing [52] 42 and flows out again through the boring 53.

A safety valve 54 is provided at the side of the output to securely take care of the increased volume or pressure at the output side of the pressure regulator 9 exceeding the deflection of the concave diaphragm

40. The valve element 55 of the safety valve 54 is biased by a closing spring 56 and it keeps closed in normal operation the pressure relief passage 57 extending from the output 46 of the pressure regulator. In the embodiment illustrated in Fig. 3, the compressed air flowing from the boring 53 in the upper housing is guided to an in-flow boring 58 in the safety valve 54 to securely maintain the closed position at any pressure set at the output-side. Any selected pressure setting that is above the pressure level of the compressed air biasing the diaphragm is automatically forwarded to the safety valve 54 whereby this pressure level effects also the [closing] valve element 55 in addition to the force of the closing spring 56.